

PCT/KR2004/002732

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

KIM, Seog-Hyun

9th Floor, Dackyung Building, 2-ka, Tacpyung-ro, Chung-ku,
Seoul 100-724 Republic of Korea**PCT**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **24 FEBRUARY 2005 (24.02.2005)**

Applicant's or agent's file reference

OP04-1077

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2004/002732

International filing date (day/month/year)

27 OCTOBER 2004 (27.10.2004)

Priority date(day/month/year)

27 OCTOBER 2003 (27.10.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC7 C12Q 1/68, C12N 15/00

Applicant

FNP CORP., LTD. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☐ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR



Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

BAIK, Kyong UP

Telephone No. 82-42-481-5596



Form PCT/ISA/237 (cover sheet) (January 2004)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/002732

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☒ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☒ in written format
- ☒ in computer readable form
- c. time of filing/furnishing
- ☒ contained in the international application as filed.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/002732

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-13 | YES |
| | Claims | NONE | NO |
| Inventive step (IS) | Claims | 1-13 | YES |
| | Claims | NONE | NO |
| Industrial applicability (IA) | Claims | 1-13 | YES |
| | Claims | NONE | NO |

2. Citations and explanations :

Claims 1-3 of the present invention relate to nucleic acids comprising a base sequence of SEQ ID NO 2 or SEQ ID NO 22, and a primer including a partial base sequence of said nucleic acids. Claims 4-10 relate to a detecting kit for CMV(Cucumber mosaic virus) resistance plants including said nucleic acid of claim 1 and the primer of claim 2, a detecting method and a genotype determining method. Claims 11-13 relate to CMV resistance plants including the nucleic acid comprising base sequence of SEQ ID NO 2 or SEQ ID NO 22.

1. Novelty

The detecting kit for CMV(Cucumber mosaic virus) resistance plants, the detecting method, the genotype determining method, and the CMV resistance plants, by means of nucleic acids comprising a base sequence of SEQ ID NO 2 or SEQ ID NO 22 and a primer including the same of claims 1-13 are novel over the cited prior art documents [PCT Article 33(2)].

2. Inventive Step

The detecting kit for CMV(Cucumber mosaic virus) resistance plants, the detecting method, the genotype determining method, and the CMV resistance plants, by means of nucleic acids comprising a base sequence of SEQ ID NO 2 or SEQ ID NO 22 and a primer including the same of claims 1-13 cannot be readily invented by a person skilled in the art. Thus claims 1-13 of the present invention are inventive [PCT Article 33(3)].

3. Industrial Applicability

Claims 1-13 of the present invention are industrially applicable [PCT Article 33(4)].